



STEREO PREAMPLIFIER

TA-E901

OPERATING INSTRUCTIONS Page 2

Before operating the unit,
please read this manual thoroughly.
This manual should be retained for future reference.

MODE D'EMPLOI Page 16

Avant la mise en service de l'appareil,
lire attentivement ce mode d'emploi.
Conserver ce manuel pour toute référence ultérieure.

BEDIENUNGSANLEITUNG Seite 30

Vor Inbetriebnahme lesen Sie bitte
diese Bedienungsanleitung aufmerksam durch.
Bewahren Sie diese Anleitung
zum späteren Nachschlagen gut auf.

MANUAL DE INSTRUCCIONES página 44

Antes de manipular el aparato, lea este manual
detenidamente.
Consérvelo para futuras referencias.

The Sony TA-E901 Stereo Preamplifier has been designed without compromise to be the top-quality preamplifier in the technically very sophisticated Sony Esprit product line.

As with all Sony Esprit components, extensive listening tests were held after any modification, no matter how small, had been made. The result is a preamp close to the committed audiophile's ideal.

You may find the separate "Technical Information" booklet on the TA-E901 of interest.



OWNER'S RECORD

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. TA-E901
Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

TABLE OF CONTENTS

Operating voltage	3
Precautions	4
A message from the TA-E901 circuit designer	5
Location and function of controls	6
Connections	8
Operation	11
Specifications	13
Trouble checks	14

OPERATING VOLTAGE

Before connecting the unit to the power source, check that the operating voltage of your unit is the same as the local power line voltage.

The U.S.A. and Canadian models operate on 120 V ac.

The Continental European model operates on 220 V ac (or 240 V ac adjustable by authorized Sony personnel).

The United Kingdom model operates on 240 V ac (or 220 V ac adjustable by authorized Sony personnel).

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

Important

The wires in this mains lead are coloured in accordance with following code.

Blue—Neutral

Brown—Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

PRECAUTIONS

On safety

- Check that the operating voltage of your unit is identical with the voltage of your local power supply.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.

On installation

- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Good air circulation is essential to prevent internal heat build-up in the unit. Place the unit in the location with adequate air circulation. Do not place the unit on a soft surface, such as a rug that would block the ventilation grid on the bottom.

On cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On repacking

Do not throw away the carton and the packing material. It makes an ideal container to transport the unit in. When shipping the unit for repair work or to another location, repack it as illustrated on the carton box.

For the customers in the USA

For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS."

A MESSAGE FROM THE TA-E901 CIRCUIT DESIGNER

—Getting the best out of the TA-E901—

When all specifications of a component have reached the measurable limit, even the slightest change in operating conditions may affect the quality of the reproduced sound. Let me remind you of several matters critical to the optimum operation of the TA-E901.

The power supply

Audio components which require little power, such as preamplifiers, can be affected by the ac power line. The TA-E901 should be plugged directly into a wall outlet with as high a power rating as possible. If you need an extension cord, use one with large conductors. An extension cord with small conductors will give the impression of a narrow dynamic range and unclear bass details. Many audiophiles know that the polarity of the ac power line influences the tonal quality. The TA-E901 power cord is marked to easily align its polarities with the ac outlet polarities. In most cases, the marked side should be inserted into the grounded side of the ac outlet and the unmarked side into the hot side. If you have a volt-ohm-milliammeter, first turn on the unit without its being connected to the system, and with the meter check the potential developed between earth ground and the component chassis at both positions of the ac power cord. Select the position at which the meter registers the lower value.

Connection to other audio components

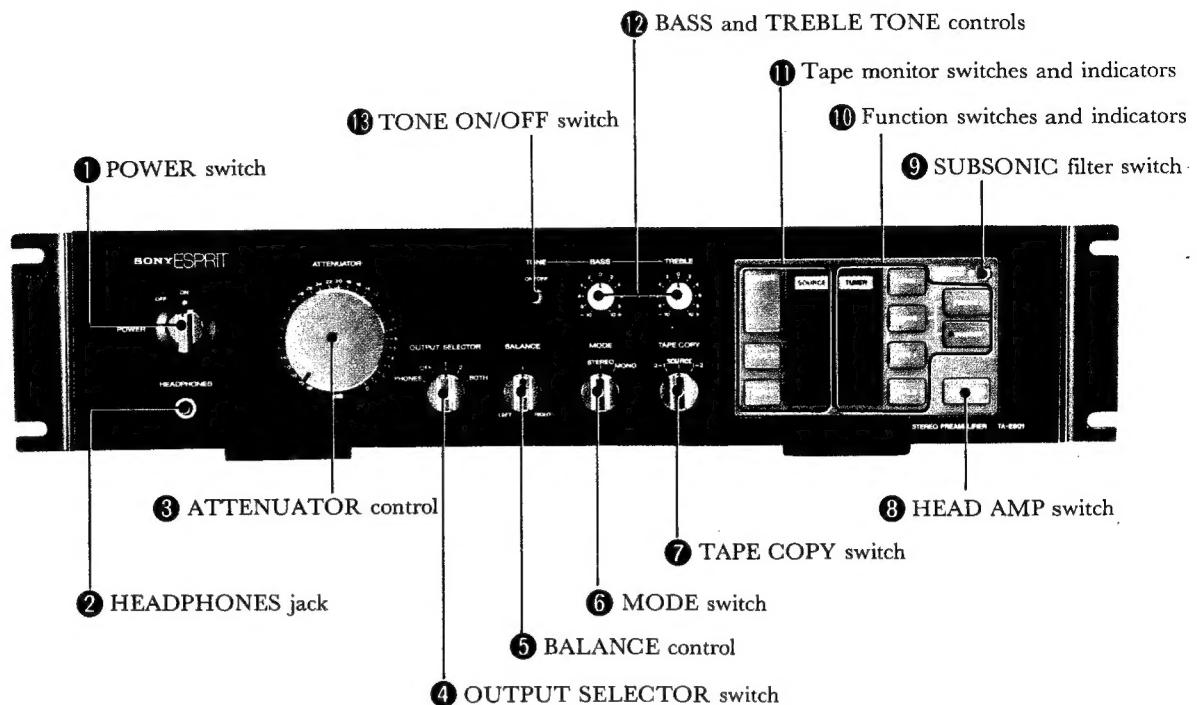
With all other audio components, such as a record player, a tuner, a tape recorder, consideration also has to be given to the polarity of the ac power cord.

When turning off these components, the potential may change and the tonal quality can be influenced. If the power consumption of a component not in use is low, we recommend keeping the power on. It is better to unplug the unit, if the unit is seldom used.

Installation

The TA-E901 is constructed so as to eliminate internal mechanical vibration of printed circuit boards and other components, but external vibration cannot be completely eliminated. Install the unit on a solid base where it is free from the direct sound pressure from the speaker system.

LOCATION AND FUNCTION OF CONTROLS



① POWER switch

Set to ON to turn the power on. A green indicator lights up and after a few seconds the unit is ready to operate.

② HEADPHONES jack

Accepts any low or high impedance stereo headphones.

③ ATTENUATOR control

Regulates the overall sound level. The control is continuously variable from the ∞ position (no gain amplification) to the 0 dB position (full gain amplification).

④ OUTPUT SELECTOR switch

Selects the preamplifier outputs.

PHONES : To monitor with the headphones. OFF : To cut off the signal path.

1 : To use the power amplifier connected to the OUTPUT 1 jacks.

2 : To use the power amplifier connected to the OUTPUT 2 jacks.

BOTH : To use both amplifiers connected to the OUTPUT 1 and 2 jacks.

⑤ BALANCE control

Governs the amount of sound coming from each paired speaker to get the optimum stereo effect. When you turn the BALANCE control to the right, the left channel volume is decreased, and vice versa. For normal operation, set the control to the center position.

⑥ MODE switch

Normally set this switch to STEREO. When checking the stereo balance or speaker phasing, set it to MONO.

⑦ TAPE COPY switch

By setting it at the TAPE 1 \rightarrow 2 or TAPE 2 \rightarrow 1 position, you can dub from one tape recorder to another, while still listening to the program source you selected

with the function switches.

TAPE 1→2: For dubbing from tape recorder 1 (for playback) to tape recorder 2 (for recording).

TAPE 2→1: For dubbing from tape recorder 2 (for playback) to tape recorder 1 (for recording).

SOURCE: For normal use or for recording a program selected by one of the function switches.

⑧ HEAD AMP switch

For a record player having a moving-coil cartridge, depress this switch. A green indicator will light up. Release it for a record player having a moving-magnet cartridge.

⑨ SUBSONIC filter switch

If subsonic noise components created by warped records, etc. are present, the audible range frequencies may be modulated and cause irritating intermodulation distortion. In this case, depress this switch. The filter will cut off any input signals below 15 Hz at a 12-dB-per-octave rate and eliminate unwanted noise components in the program source without affecting the audible range frequencies. This filter is also useful to reduce any possible howling effect which may occur when the record player and speaker systems are too close to each other.

This filter circuit is inserted only in the phono-signal path and has no effect upon program sources other than from the PHONO inputs.

⑩ Function switches* and indicators

Select a desired program source other than taped programs.

TUNER: For off-the-air programs (connected to TUNER inputs).

AUX 1, 2: For auxiliary programs (connected to AUX 1 and 2 inputs).

PHONO (primary): For disc programs.

In this case, depress the PHONO 1 or 2 switch (secondary), depending on the record players used.

⑪ Tape monitor switches* and indicators

Select either the taped programs or the other program sources.

SOURCE: For such program sources as a record player, tuner, or auxiliary source selected with the function switches.

TAPE 1: For playback of a tape recorder connected to the TAPE 1 jacks.

TAPE 2: For playback of a tape recorder connected to the TAPE 2 jacks.

⑫ BASS and TREBLE TONE controls

These knobs control the prominence of bass and treble response. Clockwise rotation increases response; counterclockwise rotation decreases it. Normally keep these at the "0" position.

Adjust the tone to the acoustic condition of the listening room or to your preference.

⑬ TONE ON/OFF switch

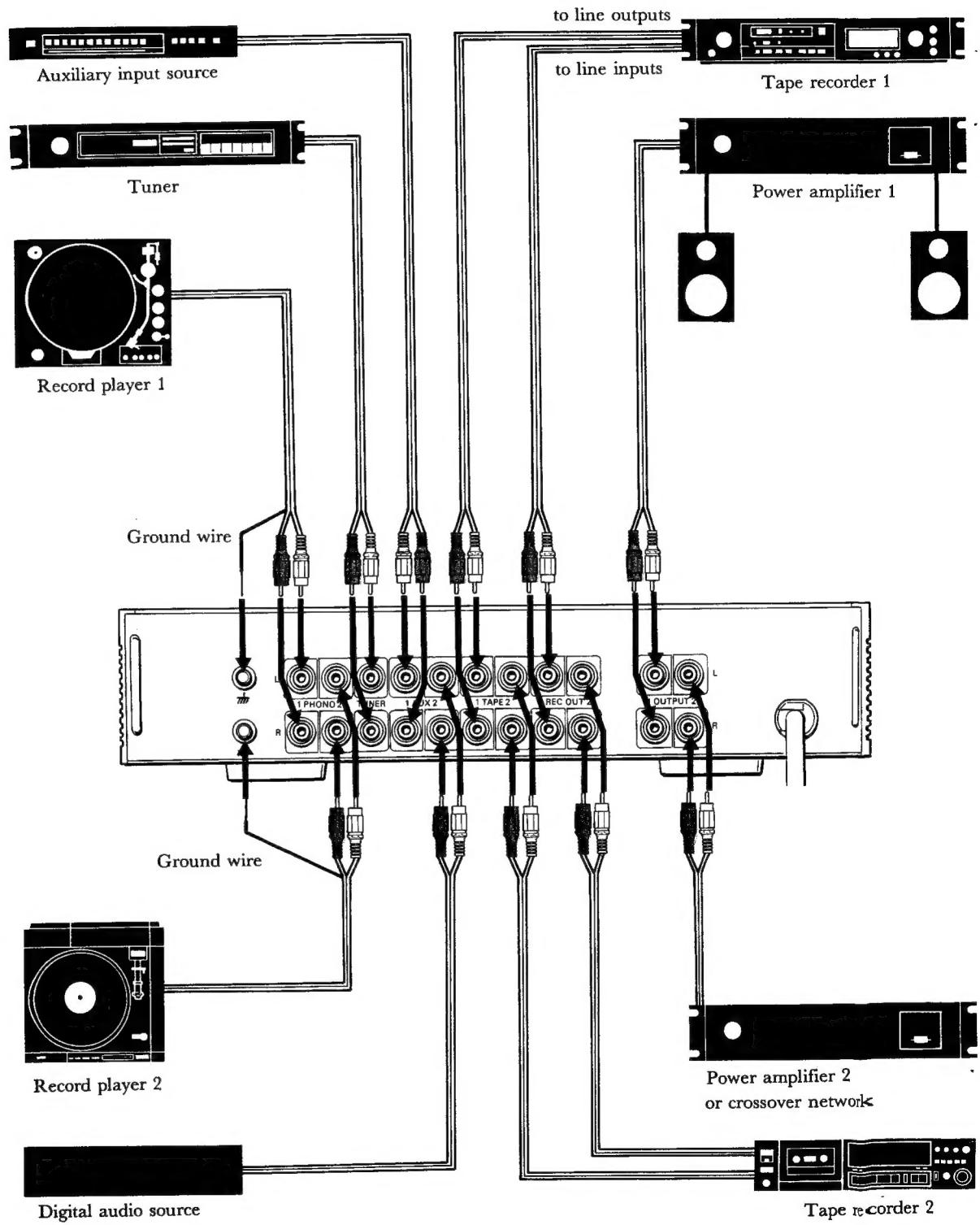
Depress this switch when you adjust the tone. An indicator lamp will light up when depressed.

While you keep the switch released, the tone control circuits are completely disconnected from the signal path and an absolutely flat frequency response is obtained.

* Due to the solenoid drive design, these switches may change their setting when the unit receives a severe shock while transported. This is not a problem. In this case, simply press the switch you desire again.

CONNECTIONS

CONNECTION DIAGRAM



NOTES

- Before making any connections, turn the POWER switch to OFF.
- Be sure not to mistake the left and right channel connections, and be sure to insert the cable connectors firmly into the jacks. Loose connections may cause hum and noise.
- For all connections, use a low-capacitance type shielded cable. Keep the cable as short as practicable, avoiding horizontal runs. Excessively long runs over 2 meters (6 feet) tend to reduce the high frequency response, while horizontal runs are susceptible to power line hum pickup.

POWER CONNECTION

Power cord

A white mark is visible on the lead of the power cord.

This will help to operate the TA-E901 and the other components of the system "in phase" by aligning the ac power cord polarities with the ac outlet polarities. In most cases, the marked plug of the TA-E901 power cord should be inserted into the grounded side of the ac outlet.

AC outlets (only for the U.S.A. and Canadian models)

AC outlets on the rear panel provide a convenient source of ac power for other connected audio components.

The UNSWITCHED outlet with a 450 watt rating is not controlled by the front panel POWER switch.

The SWITCHED outlet with a 450 watt rating is controlled by the POWER switch.

● If your Sony audio components have the polarity marked on the power cord, insert the plug with the marked-side to the left-side of the AC outlet of the TA-E901.

Never run electrical home appliances such as an electric iron, fan or TV from these outlets.

POWER AMPLIFIER CONNECTION

The TA-E901 features two pairs of preamplifier outputs—OUTPUT 1 and OUTPUT 2—either or both of which can be chosen by the use of the OUTPUT SELECTOR switch.

RECORD PLAYER CONNECTION

Two record players can be connected to the TA-E901.

By setting the HEAD AMP switch to ON, you can use a moving-coil cartridge. To prevent hum, be sure to connect the ground wire of the record player to the ground terminal (m) of the TA-E901.

- Insert the shorting plugs (supplied) for muting PHONO terminals not in use.

TAPE RECORDER CONNECTION

Two tape recorders can be connected to the TA-E901.

TUNER AND OTHER INPUT SOURCE CONNECTION

Connect the tuner to the TUNER inputs and other input sources such as a stereo TV tuner or an additional tape deck to the AUX inputs.

The TUNER, AUX and TAPE inputs are identical in sensitivity and impedance.

Note

When the line inputs (LINE IN etc.) of an additional tape deck or a digital audio processor are connected to the **REC OUT (1, 2) outputs of the TA-E901**, do not connect the line outputs (LINE OUT etc.) to the **TUNER or the AUX (1, 2) inputs**.

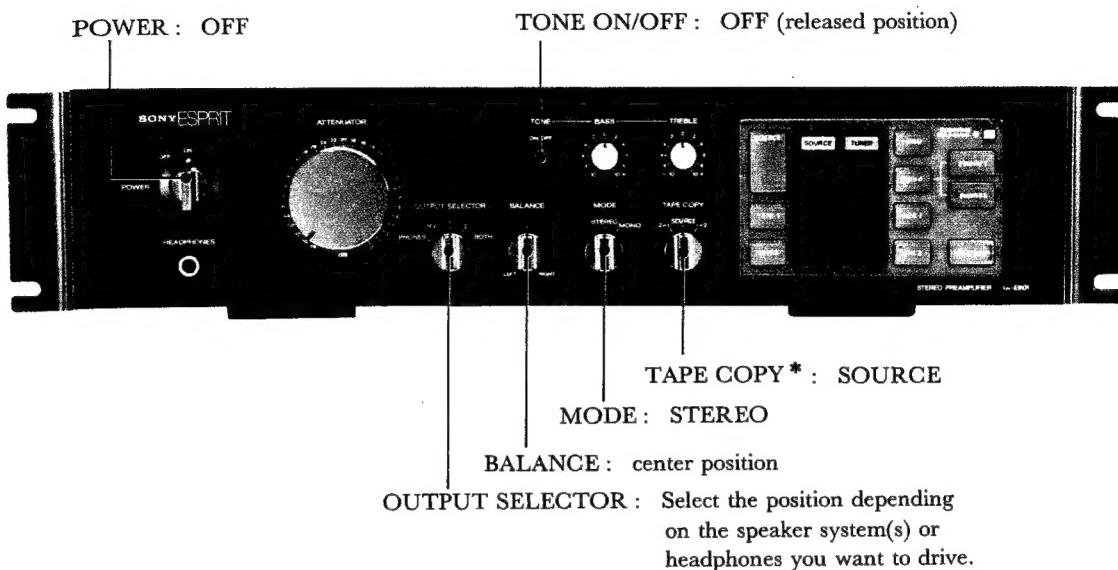
If you do so and play back the tape at a high recording level then stop the playback, loop-feedback signals may cause hum and noise and the speaker may break.

To prevent this, connect the outputs of the tape deck or the digital audio processor to the **TAPE (1, 2) inputs, or lower the recording level to “0”**.

OPERATION

PREPARATION

Set the controls and switches as shown.



TO GET SOUND

- ① Turn the ATTENUATOR control fully to the left.
- ② Set the POWER switch to ON.
- ③ Select a program source you want to listen to, using the function and tape monitor switches.
- ④ Adjust the volume with the ATTENUATOR control.

SOUND ADJUSTMENT

Stereo balance

The feeling of direction and depth that stereophonic sound produces is greatly diminished if the levels of both channels are not balanced. Balance variations with different program sources are due to differences in the recording level. The acoustics of the room also influence the stereo balance. Carpets, furniture placement, and room size and shape have a definite effect upon sound quality and balance. If necessary, adjust the stereo balance as follows:

- ① Set the MODE switch to MONO.
- ② Adjust the volume to your usual listening level by turning the ATTENUATOR control.
- ③ Adjust the BALANCE control so that the sound is heard from the center.

*When listening to program sources other than the taped programs, you may place this switch to either the 1—2 or 2—1 position. This will completely separate the amplifier's signal path from the external tape recorder (no recording output appears at the REC OUT jacks) so that the amplifier is protected from the external equipment load.

Tone

Use the TONE controls to adjust the tone to suit the characteristics of the listening room and the program source.

If the woofer cones of the speaker system move a lot when a warped record is played, depress the SUBSONIC switch to reduce the very low-frequency distortion caused by record warp.

The manipulation of the tone control section does not interrupt the signal path in the amplifier. However, its overuse may adversely affect amplifier tone quality.

TAPE RECORDING

Select the recording program with the function switches and record on a tape recorder. The REC OUT 1 and 2 jacks are parallel connected, so that you can record the same source on two tape recorders simultaneously.

● The ATTENUATOR, TONE and BALANCE controls have no effect upon the recording.

Monitoring of a 3-head tape recorder

If your tape recorder has separate record and playback heads, you can monitor the recording results by setting the tape monitor switches to either the TAPE 1 or 2 position. In this case, the monitor switch of the tape recorder should be at the TAPE position.

TAPE COPY

If you have two tape recorders, you can copy a taped program from tape recorder 1 (connected to TAPE 1 inputs) to tape recorder 2 (connected to REC OUT 2 outputs), and vice versa.

You can copy a tape while listening to record or broadcast.

For copying from tape recorder 1 to tape recorder 2

- ① Insert the recorded tape into the tape recorder 1 and a blank tape into the tape recorder 2.
- ② Set the TAPE COPY switch to 1 → 2 position.
- ③ Adjust the recording level of tape recorder 2.

Start the playback of tape recorder 1 and the recording of tape recorder 2. Copying will begin.

For copying from tape recorder 2 to tape recorder 1, set the TAPE COPY switch to 2 → 1 position and follow the same procedure.

SPECIFICATIONS

Inputs

* '78 IHF

		Sensitivity	Impedance	Maximum input level (1 kHz)	S/N (A network)
PHONO 1	MM	2.5 mV	50 kΩ	180 mV	84 dB, 80 dB*
PHONO 2	MC	0.125 mV	200 Ω	9 mV	72 dB, 70 dB*
TUNER, AUX 1, 2 TAPE 1, 2		150 mV	50 kΩ	12 V	102 dB, 88 dB*

Outputs

	Voltage	Impedance
REC OUT 1, 2	150 mV (max. 12 V)	1 kΩ
OUTPUT 1, 2	1.5 V (max. 12 V)	100 Ω
HEADPHONES	670 mV	10Ω

Harmonic distortion	Less than 0.008% (at 8 V output)
Intermodulation (IM) distortion (60 Hz : 7kHz = 4 : 1)	Less than 0.008% (at 8 V output)
Frequency response	PHONO 1,2 : RIAA equalization curve ±0.2 dB TUNER, AUX, TAPE 1,2 : 5 Hz - 200 kHz +0 -1 dB
Tone controls	BASS : ±10 dB at 60 Hz (turnover freq. 300 Hz) TREBLE : ±10 dB at 25 kHz (turnover freq. 5 kHz)
Filter (PHONO inputs)	SUBSONIC 12 dB/octave attenuation below 15 Hz
Residual noise	12 μV (A weighting network, IHF)

General

System

Head amplifier

Complementary-symmetry differential amplifier with no NFB loop

Equalizer amplifier and Flat amplifier

1st : Bootstrapped cascode differential amplifier

2nd : Cascode differential amplifier

Output : Darlington emitter-follower single end push-pull output
(equalizer amp : NF type)

Power requirements

The U.S.A. and Canadian models : 120 V ac, 60 Hz, 27 watts

The Continental European model : 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50 Hz, 35 watts

The United Kingdom model : 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50 Hz, 35 watts

AC outlets (only for the U.S.A. and Canadian models)

SWITCHED (450 watts capacity)

UNSWITCHED (450 watts capacity)

Dimensions

Approx. 480 × 105 × 465 mm (19 × 4 1/4 × 13 3/8 inches) (w/h/d)

Weight

Approx. 12.5 kg (27 lbs 9 oz), net

Approx. 13.9 kg (30 lbs 11 oz), in shipping carton

Supplied accessories

Shorting plugs (2), Mounting hardware (1 set)

While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Sony dealer if clarification on any point is required.

TROUBLE CHECKS

The following checks will assist in the correction of most problems which you may encounter with your unit. Should any problem persist after you have made these checks, consult your nearest Sony service facility.

Before going through the check list below, first refer back to the connection and operating procedures.

No audio

- Check that the ac power cord is plugged into a working outlet.
- Turn up the volume.
- Check the settings of the function switches and the tape monitor switches.
- Check the settings of the OUTPUT SELECTOR switch.
- Check speaker cord connections.

No audio from one channel or unbalanced left and right volume

- Adjust the BALANCE control.
- Check the speaker and input connections of the inoperative channel.

No tape recording

- Check that the TAPE COPY, function and tape monitor switches are set correctly.

Reversed left and right sound

- Check the MODE switch.
- Check the speaker cord connection and speaker location.

Distorted sound when increasing the ATTENUATOR volume

- Power handling capacity of the connected speaker may be low.

Severe hum or noise

- Use shielded connecting cords.
- Keep the connecting cords away from transformers or motors and at least 3 meters from TV sets and fluorescent lights.
- Ground the TA-E901.

Rustling noise

- Make secure connections.
- Wipe the plugs and jacks with a cloth lightly dampened with methanol.